doubtnut
India's Number 1 Education App

CHEMISTRY

BOOKS - PRADEEP CHEMISTRY (HINGLISH)

ENVIRONMENTAL CHEMISTRY

Curiosity

1. As we go up above the earth's surface , does temperature decrease continuously ? Explain

Watch Video Solution

2. Why we should not use freons as coolants in refrigerating equipments ?

Watch Video Solution

3. Is smog formed only in winter or only in summer or in both ? Explain

Watch Video Solution

4. Rain damages the monuments like Taj Mahal in Agra when industries are present nearby Why ?

Watch Video Solution

5. It is expected that time is not far off when coastal land will be flooded . Why ?

Watch Video Solution

6. At one time, hand pump water was considered to be pure and used freely for drinking villages but not now . Why ?

Watch Video Solution

7. How fluoride in the tooth paste protects teeth against decay ?

Watch Video Solution

8. How green chemistry has helped in the dry cleaning of clothes and laundary ?

Watch Video Solution

Advanced Problems For Competition

1. (a)Which chemical substances is present as enamel on the surface of the teeth ?

(b)Traces of fluoride ions $\left(F^{-}\right)$ in drinking water (about 1 ppm) greatly reduce the

incidence dental cavities (tooth decay) . What is the reason for reduction in cavities ?

Watch Video Solution

2. How is ozone formed in the atmosphere ? How chlorofluorocarbons destroy the ozone layer ?

Watch Video Solution

3. What would be the consequence of presence of following in water ?

(i) Sulphates $>$ 500 ppm

(ii)Fluorides between 2 ppm -10 ppm $>$ 10 ppm

(iii) Nitrates $>$ 50 ppm

Watch Video Solution

4. What is the pH of normal rain water? What happens to the pH of rain water if it is

accompanied by a thunderstorm and why?

Watch Video Solution

5. One of the products of burning of coal is a toxic gas 'A'. The gas A combines with the haemoglobin to form a compound 'B'. Concentration of A greater than 750 ppm leads to disease called 'C' in human beings. However, the patient suffering from C' can be treated in a high pressure chamber containing gas 'D'. The main product formed on keeping

in gas 'D' is the product E which helps the person to recovery. What are A, B, C, D and E? Write the reactions involved.

Watch Video Solution

6. What are the following diseases and what are they due to ?

(i) Asphyxiation (i) Pneumoconiosis (iii) Black foot (iv) Methemoglobinemia

Watch Video Solution

Test Your Grip Multiple Choice

1. Which of the following is the uppermost region of the atmosphere ?

A. Stratosphere

B. Troposphere

C. Exosphere

D. ionosphere

Answer: C

Watch Video Solution

2. Which of the following is not considered to be a pollutant ?

A. NO_2

B. CO_2

C. O_3

D. C_xH_y

Answer: B

Watch Video Solution

3. Which of the following has greatest affinity for haemoglobin ?

A. CO

B. NO

C. O_2

D. CO_2

Answer: B

Watch Video Solution

4. Ozone in stratosphere is depleted by

A. CF_2Cl_2

B. C_7H_{16}

C. $C_6H_6Cl_6$

D. C_6F_6

Answer: A

Watch Video Solution

5. Which of the following is not involved in the formation of photochemical smog ?

A. NO

B. O_3

C. C_xH_y

D. SO_2

Answer: D

Watch Video Solution

6. Which of the following is present in maximum amount in acid rain ?

A. HNO_3

B. H_2SO_4

C. HCl

D. H_2CO_3

Answer: B

Watch Video Solution

7. BOD_5 is

A. waste decomposed in 5 days

B. oxygen used in 5 days

C. microorganisms killed in 5 days

D. dissolved oxygen left after 5 days

Answer: B

Watch Video Solution

8. High concentration of fluoride is poisonous and harmful to bones and teeth at levels over

A. 1 ppm

B. 3 ppm

C. 5 ppm

D. 10 ppm

Answer: D

Watch Video Solution

Test Your Grip Fill In The Blanks

1. The region of the atmosphere lying upto 11 km from earth's surface is called whereas that lying above it upto 50 km is called _____

Watch Video Solution

2. Ozone is present in _____(region) of the atmosphere

Watch Video Solution

3. The undesirable material that enters into the environment by natural source or due to human activity is called _____

Watch Video Solution

4. The threshold limit value of CO in the air is nearly ___whereas that of CO_2 is nearly _____

Watch Video Solution

5. Dust, mist, fumes, smoke, smog etc are called _____pollutants

Watch Video Solution

6. Carbon monoxide combines with haemoglobin of form:

Watch Video Solution

7. The disease caused by oxygen starvation due to presence of 750 ppm or more carbon monoxide is called_____

Watch Video Solution

8. The loss of green colour in plants due to the presence of even a low concentration of SO_2 is called .....

Watch Video Solution

9. Organic particulates include PAH which is an abbreviation for _____

Watch Video Solution

10. The disease of lungs commonly found in industrial workers due to entry of particulates in the lungs is called _____

Watch Video Solution

11. Earth's protective umbrella existing in the stratosphere is known as _____

Watch Video Solution

12. Name the pollutants responsible for the depletion of ozone layer

Watch Video Solution

13. The depletion of ozone layer over Antarctica takes place in season and it replenishes in the month of _____

Watch Video Solution

14. Formation of London smog is initiated by a mixture of _____and _____and is formed in the _____season

Watch Video Solution

15. Photochemical smog was first observed in_____(city) and is formed from _____ and _____ in _____season

Watch Video Solution

16. PAN present in the photochemical smog stands for _____

Watch Video Solution

17. London smog is _____ in nature whereas photochemical smog is _____in nature.

Watch Video Solution

18. Acid rain contains ..... and ..... and has pH of.....

Watch Video Solution

19. In order of decreasing contribution to the green house effect, the three main gases are _____, _____ and _____

Watch Video Solution

20. The total amount of oxygen consumed by microorganisms in decomposing the waste present in a certain volume of sample of water is called _____ of water.

Watch Video Solution

21. The amount of oxygen consumed by pollutants in water found by titration with acidified $K_2Cr_2O_7$ is called _____ of water.

Watch Video Solution

22. The inflow of nutrients from fertilizers into lakes resulting in the increase of phosphate in lake water and depletion of dissolved oxygen causing the fish to die is called _____

Watch Video Solution

23. According to international standards of drinking water, the tolerable limit for fluoride ions in water is _____

Watch Video Solution

24. The three types of pesticides are named as _____ , _____ and _____

Watch Video Solution

25. Green chemistry deals with production and use of _____

Watch Video Solution

26. The gas which was released in Bhopal gas tragedy was

Watch Video Solution

Conceptual Questions

1. What do you understand by Threshold Limit Value (TLV) of a pollutant? What is its value for CO?

Watch Video Solution

2. In which part of the atmosphere, ozone is formed and how?

Watch Video Solution

3. Why does the rain water normally have a pH of about 5.6 ? When does it become acid rain ?

Watch Video Solution

4. Why is acid rain considered as a threat to 'Taj Mahal' ?

Watch Video Solution

5. What is the difference between BOD and COD? Which one is better and why?

Watch Video Solution

6. How is excess concentration of fluoride ions in water harmful for teeth?

Watch Video Solution

7. How is the use of insecticides like DDT and BHC harmful to the plants and the soil?

Watch Video Solution

8. Give three examples in which green chemistry has been applied ?

Watch Video Solution

Ncert Questions And Exercises With Answers

1. Define environmental chemistry.

Watch Video Solution

2. Explain tropospheric pollution in 100 words.

Watch Video Solution

3. Carbon monoxide gas is more dangerous than carbon dioxide gas. Why?

Watch Video Solution

4. Which gases are responsible for greenhouse effect ? List some of them.

Watch Video Solution

5. Statues and monuments in India are affected by acid rain. How?

Watch Video Solution

6. What is smog? How is classical smog different from photochemical smogs?

Watch Video Solution

7. Write down the reactions involved during the formation of photochemical smog.

Watch Video Solution

8. What are the harmful effects of photochemical smog and how can they be controlled?

Watch Video Solution

9. What are the reactions involved for ozone layer depletion in the stratosphere?

Watch Video Solution

10. What do you mean by ozone hole? What are its consequences?

Watch Video Solution

11. What are the major causes of water pollution? Explain.

Watch Video Solution

12. Have you ever observed any water pollution in your area? What measures would you suggest to control it?

Watch Video Solution

13. What do you mean by Biochemical Oxygen Demand (BOD)?

Watch Video Solution

14. Do you observe any soil pollution in your neighbourhood? What efforts will you make for controlling the soil pollution?

Watch Video Solution

15. What are pesticides and herbicides? Explain giving examples.

Watch Video Solution

16. What do you mean by green chemistry? How will it help decrease environmental pollution?

Watch Video Solution

17. What would have happened if the greenhouse gases were totally missing in the earth's atmosphere? Discuss.

Watch Video Solution

18. A large number of fish are suddenly found floating dead on a lake. There is no evidence of toxic dumping but you find an abundance of phytoplankton. Suggest a reason for the fish kill.

Watch Video Solution

19. How can domestic waste be used as manure?

Watch Video Solution

20. For your agricultural field or garden you have developed a compost producing pit. Discuss the process in the light of bad odour, flies and recycling of wastes for a good produce.

Watch Video Solution

Ncert Exemplar Problems Multiple Choice I

1. Which of the following gases is not a greenhouse gas?

A. CO

B. O_3

C. CH_4

D. H_2O vapour

Answer: A

Watch Video Solution

2. Photochemical smog occurs in warm, dry and sunny climate, One of the following is not amongst the components of photochemical smog, identify it.

A. NO_2

B. O_3

C. SO_2

D. Unsaturated hydrocarbons

Answer: C

Watch Video Solution

3. Which of the following statements is not true about classical smog?

A. Its main components are produced by the action of sunlight on emissions of automobiles and factories

B. Produced in cold and humid climate

C. It contains compounds of reducing nature

D. It contains smoke, fog and sulphur dioxide

Answer: A

Watch Video Solution

4. Biochemical Oxygen Deman, (BOD) is a measure of organic material present in water. BOD value less than $5\mathrm{ppm}$ indicates a water sample to be

A. rich in dissolved oxygen

B. poor in dissolved oxygen

C. highly polluted

D. not suitable for aquatic life

Answer: A

Watch Video Solution

5. Which of the following statements is wrong ?

A. Ozone is not responsible for greenhouse effect.

B. Ozone can oxidise sulphur dioxide present in the atmosphere to sulphur trioxide

C. Ozone hole is thinning of ozone layer present in stratosphere.

D. Ozone is produced in upper stratosphere by the action of UV rays on oxygen

Answer: A

Watch Video Solution

6. Sewage containing organic waste should not be disposed in water bodies because it causes major water pollution. Fishes in such a polluted water die because of

A. Large number of mosquitoes

B. Increase in the amount of dissolved oxygen

C. Decrease in the amount of dissolved oxygen in water

D. Clogging of gills by mud

Answer: C

Watch Video Solution

7. Which of the following statements about photochemical smog is wrong ?

A. It has high concentration of oxidising agents

B. It has low concentration of oxidising agent.

C. It can be controlled by controlling the release of NO_2, hydrocarbons, ozone, etc

D. Plantation of some plants like pinus helps in controlling photochemical smog

Answer: B

Watch Video Solution

8. The gaseous envelope aroundthe earth is known as atmosphere. The lowest layer of this is extended upto 10 km from sea level, this layer is

A. Stratosphere

B. Troposphere

C. Mesosphere

D. Hydrosphere

Answer: B

Watch Video Solution

9. Dinitrogen and dioxygen are main constituents of air but these do not react with each other to form oxides of nitrogen because a)The reaction is endothermic and requires very high temperature b).The reaction can be initiated only in presence of a catalyst c)Oxides of nitrogen are unstable d)N_2 and O_2 are unreactive

A. the reaction is endothermic and requires very high temperature

B. the reaction can be initiated only in presence of a catalyst

C. oxides of nitrogen are unstable

D. N_2 and O_2 are unreactive.

Answer: A

Watch Video Solution

10. The pollutants which come directly in the air from sources are called primary pollutes. Primary polluants are sometimes converted into secondary pollutants. Which of the following belongs to secondary air pollutants ?

A. CO

B. Hydrocarbon

C. Peroxyacetyl nitrate

D. NO

Answer: C

Watch Video Solution

11. Which of the following statements is correct?

A. Ozone hole is a hole formed in stratosphere from which ozone out

B. Ozone hole is a hole formed in the troposphere from which ozone oozes

out.

C. Ozone hole is thinning of ozone layer of stratosphere at some places.

D. Ozone hole means vanishing of ozone layer around the earth completely

Answer: C

Watch Video Solution

12. Which of the following practices will not come under green chemistry a)If possible, making use of soap made of vegetable oils instead of using synthetic detergents b)Using H_2O_2 for bleaching purpose instead of using chlorine based bleachinf agents c)Using bicycle for travelling small distances instead of using petrol/diesel based vehicles d)Using plastic cans for neatly storing substances

A. If possible, making use of soap made of vegetable oils instead of using synthetic

detergents.

B. Using H_2O, for bleaching purpose instead of using chlorine based bleaching agents.

C. Using bicycle for travelling small distances instead of using petrol/diesel based vehicles

D. Using plastic cans for neatly storing substances.

Answer: D

Watch Video Solution

Ncert Exemplar Problems Multiple Choice Ii

1. Which of the following conditions shows the polluted enviorment ?

A. pH of rain water is 5.6

B. amount of carbon dioxide in the atmosphere is 0.03%

C. biochemical oxygen demand is 10 ppm

D. eutrophication

Answer: C::D

Watch Video Solution

2. Phosphate containing fertilisers cause water pollution. Addition of such compounds in water bodies causes. . . .

A. enhanced growth of algae

B. decrease in amount of dissolved oxygen in water

C. deposition of calcium phosphate

D. increase in fish population

Answer: A::B

Watch Video Solution

3. The acids present in acid rain are _____.

a)Peroxyacetylnitrate b)H_2CO_3 c)HNO_3 d) H_2DO_4

A. Peroxyacetylnitrate

B. H_2CO_3

C. HNO_3

D. H_2SO_4

Answer: B::C::D

Watch Video Solution

4. The condecquence of global warming may be :

A. increase in average temperature of the earth

B. melting of Himalayan Glaciers

C. increased biochemical oxygen demand

D. eutrophication

Answer: A::B

Watch Video Solution

Ncert Exemplar Problems Short Answer

1. Green house effect leads to global warming. Which substances are responsible for green house effect ?

Watch Video Solution

2. Acid rain is known to contain some acids. Name these acids and where from they come in rain ?

Watch Video Solution

3. Ozone is a toxic gas and is a strong oxidising agent even then its present in the stratosphere is very important. Explain what would happen if ozone from this region is completely removed ?

Watch Video Solution

4. Dissolved oxygen in wate is very important for aquatic life. What process are responsible

for the reduction of dissolved oxygen in water ?

Watch Video Solution

5. On the basis of chemical reactions involved, explain how do chlorofluorocarbons cause thinning of ozone layer is stratosphere ?

Watch Video Solution

6. What could be the harmful effects of improper management of industrial and domestir solid wate in a city ?

Watch Video Solution

7. During an educational trip, a student of botany saw a beautiful lake in a village. She collected many plants from that area. She notices that villagers were washings clothes around the lake and at some places waste

material from houses was destroying its beauty.

After few years, shw visited the same lake again. She was suprised to find that the lake was covered with algae, stinking smell was coming out and its water had become unusable. Can you explain the reason for this condition of the lake ?

Watch Video Solution

8. What are biodegradable and non-biodegradable pollutants ?

Watch Video Solution

9. What are the sources of dissolved oxygen in water ?

Watch Video Solution

10. What is the importance of measuring BOD of a water body ?

Watch Video Solution

11. Why does water covered with excessive algal growth become polluted ?

Watch Video Solution

12. A factory was started near a village. Suddenly villagers started feeling the presence of irriting vapour in the village and cases of headache, chest pain, cough, dryness of throat and breathing problems increased. Villagers blamed the emissions from the chimney of the factory for such problems. Explain what colud have happend. Give chemical reactions for the support of your explanation.

Watch Video Solution

13. Oxidation of sulphur dioxide into sulphur trioxide in the absence of a catalyst is a slow process but this oxidation occurs easily in the atmosphere. Explain how does this happen? Give chemical reactions for the conversion of SO_2 into SO_3.

Watch Video Solution

14. From where does ozone come in the photochemical smog ?

Watch Video Solution

15. How is ozone produced in stratosphere?

Watch Video Solution

16. Ozone is a gas hevier than air. Wy does ozone layer not settle down near the earth ?

Watch Video Solution

17. Some time ago formation of polar stratospheri clouds reported over Antarctica. Why were these formed ? What happens when such clouds break up by warmth of sunlight ?

Watch Video Solution

18. A person was using water supplied by Municipality. Due to shortage of water the started underground water. He felt laxative effect. What could be the cause ?

Watch Video Solution

Ncert Exemplar Problems Matching Type Questions

1. Match the terms given in column I with the compounds given in column II.

View Text Solution

2. Match the pollutants in column I with the effects in column II.

View Text Solution

3. Match the pollutants given in column I with their effects given in column II.

View Text Solution

Ncert Exemplar Problems Assertion And Reason Type Questions

1. Assertion (A) : Green house effect was observed in houses used to grow plants and these are made of green glass.

Reason (R) : Green house name has been given because glass houses are made of green glass

a)Both A and R are correct and R is the correct explanation of A. b).Both A and R are correct but R is not the correct explanation of A.

c)Both A and R are not correct. d)A is not correct but R is correct.

A. Both Assertion and Reason are correct and is the correct explanation of Assertion

B. Both Assertion and Reason are correct but Reason is not the correct explanation of Assertion

C. Both Assertion and Reason are not correct

D. Assertion is not correct but Reason is correct

Answer: C

Watch Video Solution

2. Assertion (A) : The pH of acid rain is less than 5.6.

Reason (R) : Carbon dioxide present in the atmosphere dissolves in rain water and forms carbonic acid. a)Both A and R are correct and R

is the correct explanation of A. b).Both A and R are correct but R is not the correct explanation of A. c)Both A and R are not correct. d)A is not correct but R is correct.

A. Both Assertion and Reason are correct and is the correct explanation of Assertion

B. Both Assertion and Reason are correct but Reason is not the correct explanation of Assertion

C. Both Assertion and Reason are not correct

D. Assertion is not correct but Reason is correct

Answer: B

Watch Video Solution

3. Assertion: Photochemical smog is oxidising in nature.

Reason: Photochemical smog contains NO_2

and O_3 which are formed during the sequence of reactions.

A. Both Assertion and Reason are correct and is the correct explanation of Assertion

B. Both Assertion and Reason are correct but Reason is not the correct explanation of Assertion

C. Both Assertion and Reason are not correct

D. Assertion is not correct but Reason is correct

Answer: A

Watch Video Solution

4. Assertion (A) : Carbon dioxide is one of the important greenhouse gases.

Reson (R) : It is largely produced by respiratory function of animals and plants. a)Both A and R are correct and R is the correct explanation of

A. b).Both A and R are correct but R is not the correct explanation of A. c)Both A and R are not correct. d)A is not correct but R is correct.

A. Both Assertion and Reason are correct and is the correct explanation of Assertion

B. Both Assertion and Reason are correct but Reason is not the correct explanation of Assertion

C. Both Assertion and Reason are not correct

D. Assertion is not correct but Reason is correct

Answer: B

Watch Video Solution

5. Assertion (A) : Ozone is destroyed by solar radiation in upper streatosphere.

Reason (R) : Thinning of the ozone layer allows

excessive UV radiations to reach the surface of earth. a)Both A and R are correct and R is the correct explanation of A. b).Both A and R are correct but R is not the correct explanation of A. c)Both A and R are not correct. d)A is not correct but R is correct.

A. Both Assertion and Reason are correct and is the correct explanation of Assertion

B. Both Assertion and Reason are correct but Reason is not the correct

explanation of Assertion

C. Both Assertion and Reason are not correct

D. Assertion is not correct but Reason is correct

Answer: D

Watch Video Solution

6. Assertion (A) : Excessive use of chlorinated synthetic pesticides causes soil and water pollution.

Reason (R) : Such pesticides are non-biodegradable. Both A and R are correct and R is the correct explanation of A. a)Both A and R are correct and R is the correct explanation of A. b).Both A and R are correct but R is not the correct explanation of A. c)Both A and R are not correct. d)A is not correct but R is correct.

A. Both Assertion and Reason are correct and is the correct explanation of Assertion

B. Both Assertion and Reason are correct but Reason is not the correct explanation of Assertion

C. Both Assertion and Reason are not correct

D. Assertion is not correct but Reason is correct

Answer: A

Watch Video Solution

7. Assertion: If BOD level of water in a reservoir is less than 5 ppm it is highly pollution.

Reason: High biological oxygen demand means low activity of vacteria in water.

A. Both Assertion and Reason are correct and is the correct explanation of

Assertion

B. Both Assertion and Reason are correct but Reason is not the correct explanation of Assertion

C. Both Assertion and Reason are not correct

D. Assertion is not correct but Reason is correct

Answer: C

Watch Video Solution

Ncert Exemplar Problems Long Answer Type Questions

1. How can you apply green chemistry for the following ?

(a) To control photochemical smog.

(b) To avoid use of halogenated solvents in dryclening and that of chlorine in bleaching.

(c) to reduce use of synthestic detergents.

(d) To reduce the consumption of petrol and diesel.

Watch Video Solution

2. Green plants use carbon dioxide for photosynthesis and return oxygen to the atmosphere , even then carbon dioxide is considered to be responsible for green house effect. Explain why ?

Watch Video Solution

3. Explain how does greenhouse effect cause global warming.

Watch Video Solution

4. A farmer was using pesticides on his farm. He used the produce of his farm as food for rearing fishes, He was told that fishes were not fit for human consumption because large amount of pesticides had accumulated in the tissues of fishes. Explain how did this happen ?

Watch Video Solution

5. For dry cleaning, in the place of tetrachloroethane, liquefied carbon dioxide with suitable detergent is an alternative solvent. What type of harm to the environment will be prevented by stopping use of tetrachloroethane? Will use of liquefied carbon dioxide with detergent be completely safe from the point of view of pollution? Explain

Watch Video Solution

Additional Questions Very Short Answer

1. What is temperature range of the atmosphere ?

Watch Video Solution

2. Name the different rexampletions of the atmosphere along with their altitudes and temperature.

Watch Video Solution

3. In what regions of the atmosphere, the temperature increases with altitude and in which regions it decreases.

Watch Video Solution

4. What do you mean by 'Inversion temperature' in different rexampleions of the atmosphere ?

Watch Video Solution

5. What gas leaked to bring havoc in Bhopal tragedy ?

Watch Video Solution

6. What are primary and secondary pollutants of the air ?

Watch Video Solution

7. What is % of CO_2 in the pure dry air ?

Watch Video Solution

8. Name three natural sources of air pollution.

Watch Video Solution

9. Name three gases which are major air pollutants .

Watch Video Solution

10. What is the compound formed when CO combines with blood ?

Watch Video Solution

11. What is anoxia or asphyxiation ?

Watch Video Solution

12. How are NO and NO_2 formed in the atmosphere ?

Watch Video Solution

13. How are flue gases from industries freed from oxides of nitrogen and sulphur ?

Watch Video Solution

14. What is chlorosis ?

Watch Video Solution

15. What are the reactions involved in removing SO_2 from the atmosphere by passing it through a solution containing citrate ions ?

Watch Video Solution

16. What is the size range of particulates?

Watch Video Solution

17. What is the role of chloromethane and dibromoethane when added to gasoline along with tetraethyl lead ?

Watch Video Solution

18. What type of aromatic compounds are present as particulate in the air ?

Watch Video Solution

19. What are 'asbestosis' and 'silicosis'?

Watch Video Solution

20. How particulates help in the cloud formation ?

Watch Video Solution

21. What are viable and non-viable particulates

Watch Video Solution

22. Which zone is called ozonosphere ?

Watch Video Solution

23. Which main compounds are causing damage to ozone layer ?

Watch Video Solution

24. Why there is ozone depletion mainly ones an Antartica ?

Watch Video Solution

25. What are Polar Stratospheric Clouds (PSCs)?

Watch Video Solution

26. In which season the depletion of ozone on Antartica takes place and when it is replenished .

Watch Video Solution

27. What is Polar Vortex ? What is its effect ?

Watch Video Solution

28. What gaseous species are present in the mesosphere and thermosphere ?

Watch Video Solution

29. What is the composition of London smog ?

Watch Video Solution

30. In which season and what time of the day, there is 'London smog'

Watch Video Solution

31. What the nature of 'London smog'?

Watch Video Solution

32. Why 'photochemical smog' is so called ?

Watch Video Solution

33. In which season and what time of the day, there is photochemical smog?

Watch Video Solution

34. What is the nature of photochemical smog?

Watch Video Solution

35. Which acids are present in the acid rain ?

Watch Video Solution

36. What is marine pollution ?

Watch Video Solution

37. What type of pollution affects the sea-birds?

Watch Video Solution

38. What is siltation ?

Watch Video Solution

39. What are the main sources of thermal pollution ?

Watch Video Solution

40. What are surfactants chemical used in synthetic detergents ?

Watch Video Solution

41. What is the role of builder in synthetic detergents ?

Watch Video Solution

42. What is BOD ?

Watch Video Solution

43. What is COD ? Write chemical substance is generally used in measurement ?

Watch Video Solution

44. Why is COD preferred over BOD ?

Watch Video Solution

45. What is humification?

Watch Video Solution

46. What is loam soil ?

Watch Video Solution

47. What should be the tolerable limit of fluoride ions in drinking water ? What happens

if it is higher than 10 ppm ?

Watch Video Solution

48. Suggest any four methods for waste management

Watch Video Solution

49. Name three methods generally used in green chemistry.

Watch Video Solution

Additional Questions Short Answer

1. Define environmental chemistry and environmental science

Watch Video Solution

2. Define environmental pollution. List three episodes of recent past of environmental pollution.

Watch Video Solution

3. What are primary and secondary pollutants of the air ?

Watch Video Solution

4. What are biodegradable and non-biodegradable pollutants ?

Watch Video Solution

5. Depending upon the nature of pollutant, how can the pollution be classified into different types ?

Watch Video Solution

6. What is the composition of pure dry air ? What do you mean by the terms 'sink and 'target' with respect to pollution

Watch Video Solution

7. List three natural sources and five man-made sources responsible for air pollution

Watch Video Solution

8. What are the main air pollutants ? Write about the sources and harmful effects of any one of them.

Watch Video Solution

9. How carbon monoxide acts as a poison for human beings ?

Watch Video Solution

10. What remedial steps should be taken to save a person suffering from CO poisoning ?

Watch Video Solution

11. What are sources and sinks of nitrogen oxides as air pollutant ? What are their effects ?

Watch Video Solution

12. How can pollution due to nitrogen oxides be controlled ?

Watch Video Solution

13. What are sources and sinks of sulphur dioxide pollution ?

Watch Video Solution

14. How can SO_x pollution be controlled ?

Watch Video Solution

15. What are particulates ? What are their sources ?

Watch Video Solution

16. How lead halides enter into atmosphere as pollutants?

Watch Video Solution

17. What are the harmful effects of particulate pollutants ? List at least five of them.

Watch Video Solution

18. What are the pollutants attacking Taj Mahal ? How are they being produced in the atmosphere ?

Watch Video Solution

19. List ten industries responsible for causing air pollution

Watch Video Solution

20. What chemical reactions are occurring in the stratosphere ?

Watch Video Solution

21. How NO is depleting ozone layer ?

Watch Video Solution

22. How are freons creating a hole in the ozone layer?

Watch Video Solution

23. What are the reactions occurring in the mesosphere ?

Watch Video Solution

24. How ozone layer is formed and acting as a protecting umbrella ?

Watch Video Solution

25. What are the factors responsible for depletion of ozone layer ? What are the chemical reactions involved ?

Watch Video Solution

26. What do you understand by ozone hole ? Why does it occur mainly over Antarctica ?

Watch Video Solution

27. What do you understand by (i) polar stratospheric clouds (ii) polar vortex ?

Watch Video Solution

28. List the main points of difference between 'London smog' and 'Photochemical smog'

Watch Video Solution

29. What is Los Angeles smog ? How is it produced in the atmosphere ?

Watch Video Solution

30. What is Acid rain ? What are its harmful effects ?

Watch Video Solution

31. What is Acid rain ? What are its harmful effects ?

Watch Video Solution

32. What is Green house effect ? How does it affect the global climate ?

Watch Video Solution

33. Why does green house effect cause global warming ? What could be the consequences of global warming ?

Watch Video Solution

34. What is ground water pollution ? How does it take place ?

Watch Video Solution

35. How is the pollution of river water caused ? Which plans have been made by Government of India so as to stop this pollution ?

Watch Video Solution

36. What is marine pollution ? What are the sources of oil pollution in sea water ?

Watch Video Solution

37. What are the effects of oil pollution in sea water?

Watch Video Solution

38. List at least five important sources responsible for water pollution.

Watch Video Solution

39. What are the main inorganic and organic pollutants present water ?

Watch Video Solution

40. How synthetic detergents present as water pollutant create problems?

Watch Video Solution

41. What are oxygen-demanding wastes ? Define BOD ?

Watch Video Solution

42. How does oxygen reach water? How is the oxygen content of a sample of water measured ?

Watch Video Solution

43. How plant nutrients and pesticides act as water pollutants ?

Watch Video Solution

44. What are thermal pollutants ? What are their sources ? What damage is done by them ?

Watch Video Solution

45. Which soil is considered as best soil for most of the crops ? What is its composition ?

Watch Video Solution

46. Name at least four soil pollutants. Explain one of them

Watch Video Solution

47. What are different sources of soil - pollution ? Name the pollutants being added by them ?

Watch Video Solution

48. How should the management of domestic waste be done ?

Watch Video Solution

49. Comment on the statement-Green chemistry is an alternative tool for reducing pollution

Watch Video Solution

50. Give some examples of the achievements of green chemistry

Watch Video Solution

Additional Questions Long Answer

1. What are the main components of our environment ? Explain each of them briefly

Watch Video Solution

2. What is environmental chemistry ? Discuss its social relevance.

Watch Video Solution

3. Difine the environmental pollulant. What do you understand by an environmental pollution model ?

Watch Video Solution

4. What is Air pollution ? What are the main sources of air pollution ? Write a few lines about each of them.

Watch Video Solution

5. What are major air pollutants ? Briefly explain any two of them

Watch Video Solution

6. Describe briefly the hydrocarbons and particulates as pollutants

Watch Video Solution

7. Briefly explain different methods used to control particulate pollutants

Watch Video Solution

8. What do you understand by (i)Mists (ii) Smoke (iii) Fumes and (iv) Dust ?

Watch Video Solution

9. Explain the reactions occurring in different regions of the atmosphere.

Watch Video Solution

10. Name two different types of "smog" Explain briefly how are they formed ?

Watch Video Solution

11. What are smogs ? Distinguish between classical and photochemical smogs

Watch Video Solution

12. How is photochemical smog formed ? What are its effects?

Watch Video Solution

13. Write an explanatory note on "Acid Rain."

Watch Video Solution

14. What is "Greenhouse effect" ? Why is it so called ? What are its consequences?

Watch Video Solution

15. How can you classify water pollution into different types ? Briefly explain each one of them

Watch Video Solution

16. What are the international standards for drinking water ?

Watch Video Solution

17. How can you classify water pollution into different types ? Briefly explain each one of them

Watch Video Solution

Analytical Questions And Problems With Answers Solutions

1. What is the difference between pollutant and contaminant?

Watch Video Solution

2. Why is London smog formed in winter while photochemical smog is formed in summer?

Watch Video Solution

3. Fish do not grow as well in warm water as in cold water. Why ?

View Text Solution

4. Explain giving reasons. 'The presence of CO reduces the amount of haemoglobin available in the blood for carrying oxygen to the body cells'.

Watch Video Solution

5. What is pneumoconiosis? How does it occur ?

Watch Video Solution

6. The depletion of ozone layer occurs over Antarctica during spring time and it gets replenished after spring time. Explain.

Watch Video Solution

7. Explain the term eutrophication with suitable example.

Watch Video Solution

Competition Focus Jee Main And Advanced Medical Entrance I Multiple Choice

1. Which of the following is the coldest layer?

A. Troposphere

B. Mesosphere

C. Stratosphere

D. Thermosphere

Answer: B

Watch Video Solution

2. Which oxide of nitrogen is not a common pollutant introduced into the atmosphere both due to natural and human activity?

A. N_2O

B. NO_2

C. N_2O_5

D. NO

Answer: C

Watch Video Solution

3. Which of the following is a secondary pollutant ?

A. CO_2

B. N_2O

C. SO_2

D. PAN

Answer: D

Watch Video Solution

4. A primary pollutant is

A. SO_2

B. H_2SO_4

C. NO_2

D. Particular matter

Answer: B

Watch Video Solution

5. Which of the following is a sink for CO?

A. Haemoglobin

B. Microorganism present in the soil

C. Oceans

D. Plants

Answer: B

Watch Video Solution

6. The gas leaked from a storage tank of the Union Carbide plant in Bhopal gas tragedy was :

A. Phosgene

B. Methylisocyanate

C. Methylamine

D. Ammonia

Answer: B

Watch Video Solution

7. The size of particulates of H_2SO_4 fog lies in the range.

A. 5-100 nm

B. 100-500 nm

C. 500-1000 nm

D. 1000-10,000 nm

Answer: C

Watch Video Solution

8. The aromatic compounds is present as particulates are

A. Benzene

B. Toluene

C. Nitrobenzene

D. Polycyclic hydrocarbons

Answer: D

Watch Video Solution

9. Ozone layer is present in

A. troposphere

B. stratosphere

C. mesosphere

D. exosphere

Answer: B

Watch Video Solution

10. Depletion of ozone layer causes

A. blood cancer

B. lung cancer

C. skin cancer

D. breast cancer

Answer: C

Watch Video Solution

11. Which one of the following is responsible for depletion of the ozone layer in the upper strata of the atmosphere?

A. polyhalogens

B. ferrocene

C. fullerenes

D. freons

Answer: D

Watch Video Solution

12. London smog is found in

A. Summer during day time

B. Summer during morning time

C. Winter during morning time

D. Summer during day time

Answer: C

Watch Video Solution

13. Photochemical smog is formed in

A. Summer during morning time

B. Summer during day time

C. Winter during morning time

D. Winter during day time

Answer: B

Watch Video Solution

14. Which one of the following statement is false ?

A. Photochemical smog causes irritation in eyes

B. London smog is a mixture of smoke and fog

C. Photochemical smog results in the formation of PAN

D. London smog is oxidising in nature

Answer: D

Watch Video Solution

15. Which of the following is true about photochemical smog ?

A. It is reducing in nature

B. It is formed in winter

C. It is a mixture of smoke and fog

D. It causes irritation in eyes

Answer: D

Watch Video Solution

16. The smog is essentially caused by the presence of

A. O_2 and O_3

B. O_2 and N_2

C. Oxides of sulphur and nitrogen

D. O_3 and N_2

Answer: C

Watch Video Solution

17. Pick up the correct statement

A. CO which is a major pollutant resulting from the combustion of fuels in automobiles plays a major role in photochemical smog.

B. Classical smog has an oxidizing character while the photochemical smog is reducing in character

C. Photochemical smog occurs in day time whereas the classical smog occurs in the morning hours

D. During formation of smog the level of ozone in the atmosphere goes down.

Answer: C

Watch Video Solution

18. In Antartica, ozone depletion is due to the formation of the following compound

A. Acrolein

B. peroxyacetyl nitrate

C. SO_2 and SO_3

D. chlorine nitrate

Answer: D

Watch Video Solution

19. Which of the following is not a greenhouse gas ?

A. Methane

B. Ozone

C. Carbondioxide

D. Nitrogen

Answer: D

Watch Video Solution

20. Among the following the one which is not a 'greenhouse gas' is

A. N_2O

B. CO_2

C. CH_4

D. O_2

Answer: D

Watch Video Solution

21. Identify the wrong statement in the following:

A. Ozone layer does not permit infrared radiation from the sun to reach the earth

B. Acid rain is mostly because of oxides of nitrogen and sulphur

C. Chlorofluorocarbons are responsible for ozone layer depletion

D. Green house effect is responsible for global warming

Answer: A

Watch Video Solution

22. The gas emitted by supersonic jet planes that slowly depletes the ozone layer is

A. CO

B. NO

C. SO_2

D. O_2

Answer: B

Watch Video Solution

23. The pH of normal rain water is

A. 6.5

B. 7.5

C. 5.6

D. 3.5

Answer: C

Watch Video Solution

24. The process of "eutrophication" is due to:

A. increase in concentration of insecticide in water

B. increase in concentration of fluoride ion in water

C. the reduction in concentration of the dissolved oxygen in water due to phosphate pollution in water

D. attack of younger leaves of a plant by peroxyacetyl nitrate

Answer: C

Watch Video Solution

25. Excess nitrate in drinking water can cause:

A. methemoglobinemia

B. kidney damage

C. liver damage

D. laxative effect

Answer: A

Watch Video Solution

26. The maximum prescribed concentration of cadmium in drinking water in ppm is

A. 0.05

B. 3

C. 2

D. 0.005

Answer: D

Watch Video Solution

27. The concentration of fluoride, lead, nitrate and iron in a water sample from an underground lake was found to be 1000

ppb,40 ppb,100 ppm and 0.2 ppm, respectively. This water is unsuitable for drinking due to high concentration of

A. fluoride

B. lead

C. nitrate

D. iron

Answer: C

Watch Video Solution

28. A water sample has ppm level concentration of following anions

$F^- = 10, SO_4^{2-} = 100, NO_3^- = 50$

the anion/anions that make/makes the water sample unsuitable for drinking is/are

A. only F^-

B. only SO_4^{2-}

C. only NO_3^-

D. both SO_4^{2-} and NO_3^-

Answer: A

Watch Video Solution

29. The recommended concentration of fluoride ion in drinking water is up to 1 ppm as fluoride ion is required to make teeth enamel harder by converting $[3Ca_3(PO_4)_2.Ca(OH)_2]$

A. $[CaF_2]$

B. $[3(CaF_2).Ca(OH)_2]$

C. $[3Ca_3(PO_4)_2.CaF_2]$

D. $[3(Ca(OH)_2.CaF_2)]$

Answer: C

Watch Video Solution

30. Which one of the following statement is not correct?

A. DDT and BHC are not good insecticides because they are highly soluble in water

B. DDT and BHC are not good insecticides because they are absorbed by the soil

and contaminate root crops

C. Aldrin is not a good insecticide because it is not biodegradable

D. All the above are incorrect

Answer: A

Watch Video Solution

31. Green chemistry means such reactions which

A. produce colour during reactions

B. reduce the use and production of hazardous chemicals

C. are related to the depletion of ozone layer

D. study the reactions in plants

Answer: B

Watch Video Solution

32. Green chemistry deals with study of ?

A. study of plant physiology

B. study of extraction of natural products from plants

C. detailed study of reactions involved in the synthesis of chlorophyll

D. utilization of existing knowledge base for reducing the chemical hazards along with developmental activities

Answer: D

Watch Video Solution

33. Which one of the following statement is not true ?

A. Oxides of sulphur, nitrogen and carbon are the most widespread air pollutant

B. pH of drinking water should be between 5.5-9.5

C. Concentration of DO below 6 ppm is good for the growth of fish

D. Clean water would have a BOD value of less than 5 ppm

Answer: C

Watch Video Solution

Competition Focus Jee Main And Advanced Medical Entrance Ii Multiple Choice Questions

1. The ozone layer is depleted by

A. NO

B. SO_2

C. C_xH_y

D. CFCs

Answer: A::D

Watch Video Solution

2. Choose the wrong statements :

A. CO_2 is responsible for greenhouse effect.

B. CO_2 can absorb infrared red radiation but does not allow then to pass through

C. NO is more harmful than NO_2

D. Acid rain contains mainly HNO_3

Answer: C::D

Watch Video Solution

Competition Focus Jee Main And Advanced Medical Entrance V Integer Type Questions

1. CO is a pollutant produced due to incomplete combustion of butane . One mole of butane requires 6.5 moles of O_2 for complete combustion. If 6 moles of oxygen are available , then number of moles of CO produced will be

Watch Video Solution

2. In hemoglobin, CO and not O_2 links to Fe (if both CO and O_2 are present) because CO is a stronger ligand than O_2. The number of groups to which Fe is coordinated other than vacant site for CO in haemoglobin is

View Text Solution

3. In measurement of BOD_x, x is generally taken as

Watch Video Solution

4. Water is considered as pure if it has BOD less than_____ ppm

Watch Video Solution

Competition Focus Jee Main And Advanced Medical Entrance Vi Assertion Reason Type I

1. Statement-1. Photochemical smog is a combination of photons with smoke and fog.

Statement-2. Photochemical smog is formed in the troposphere.

A. Statement-1 is True, Statement-2 is True : Statement-2 is a correct explanation for Statement-1

B. Statement-1 is True, Statement-2 is True : Statement-2 is not a correct explanation for Statement-1

C. Statement-1 is True, Statement-2 is False

D. Statement-1 is False, Statement-2 is True

Answer: D

Watch Video Solution

2. Assertion: CO & NO both combine with haemoglobin.

Reason: Both have equal affinity for haemoglobin.

A. Statement-1 is True, Statement-2 is True : Statement-2 is a correct explanation for Statement-1

B. Statement-1 is True, Statement-2 is True : Statement-2 is not a correct explanation

for Statement-1

C. Statement-1 is True, Statement-2 is False

D. Statement-1 is False, Statement-2 is True

Answer: C

Watch Video Solution

Competition Focus Jee Main And Advanced Medical Entrance Vi Assertion Reason Type Ii

1. Assertion. The temperature in the stratosphere increases with altitude

Reason. Ozone present absorbs the ultraviolet radiation.

A. If both Assertion and Reason are true and Reason is the correct explanation of Assertion.

B. Both Assertion and Reason are true but Reason is not the correct explanation of Assertion

C. If Assertion is true but Reason is false

D. If both Assertion and Reason are false

Answer: A

Watch Video Solution

2. Assertion : For greenhouse effect, presence of green plants is not essential.

Reason : Chlorophyll of the green plants causes green house effect.

A. If both Assertion and Reason are true and Reason is the correct explanation of Assertion.

B. Both Assertion and Reason are true but Reason is not the correct explanation of Assertion

C. If Assertion is true but Reason is false

D. If both Assertion and Reason are false

Answer: D

Watch Video Solution

3. Assertion. Photochemical smog does not involve the condensation of any kind of fog on smoke particles and hence the word smog is a misnomer

Reason. Photochemical smog is due to photochemical oxidation of SO_2 to SO_3 which dissolves in moisture of the air to form sulphurous acid which is injurious to health.

A. If both Assertion and Reason are true and Reason is the correct explanation of

Assertion.

B. Both Assertion and Reason are true but Reason is not the correct explanation of Assertion

C. If Assertion is true but Reason is false

D. If both Assertion and Reason are false

Answer: C

Watch Video Solution

4. Assertion : London smog is oxidising in nature .

Reason : London somg contains O_3, NO_2 and Hydrocabons .

A. If both Assertion and Reason are true and Reason is the correct explanation of Assertion.

B. Both Assertion and Reason are true but Reason is not the correct explanation of Assertion

C. If Assertion is true but Reason is false

D. If both Assertion and Reason are false

Answer: D

Watch Video Solution

5. Assertion. CO and NO both combine with hemoglobin

Reason. NO has more affinity than CO towards haemoglobin.

A. If both Assertion and Reason are true and Reason is the correct explanation of Assertion.

B. Both Assertion and Reason are true but Reason is not the correct explanation of Assertion

C. If Assertion is true but Reason is false

D. If both Assertion and Reason are false

Answer: B

Watch Video Solution

6. Assertion. The catalytic converter in the car's exhaust system converts polluting exhaust gases into non toxic gases

Reason Catalytic converter contains a mixture of transition metals and their oxides embedded in the inner support

A. If both Assertion and Reason are true and Reason is the correct explanation of Assertion.

B. Both Assertion and Reason are true but Reason is not the correct explanation of Assertion

C. If Assertion is true but Reason is false

D. If both Assertion and Reason are false

Answer: A

Watch Video Solution